WHAT IS CLAIMED IS:

1. An alignment assembly enclosed within an optics module having a light source and a lens comprising:

an alignment stage coupled to enable adjustment of a relative position of said light source and said lens, said alignment stage being manipulable from an exterior of said optics module;

a meltable material positioned within said optics module to lock said alignment stage in a fixed location when a target said relative position of said light source and lens is achieved; and

a heat source in heat-transfer engagement with said meltable material to selectively melt said meltable material.

2. The alignment assembly of claim 1 wherein said alignment stage is responsive to first applied displacement forces which induce lateral movements of said alignment stage in achieving said target relative position of said light source and said lens, said alignment stage being responsive to second applied displacement forces which induce said alignment stage to contact said meltable material when said target relative position is achieved.

3. The alignment assembly of claim 2 wherein said second applied displacement forces are electrostatic forces applied to said alignment stage to induce displacement in a direction that is generally perpendicular to said lateral movements induced by said first applied displacement forces.

4. The alignment assembly of claim 2 wherein said alignment stage includes a metallic plating that is located such that said metallic plating contacts said meltable material when said second applied displacement forces are generated, said meltable material being a solder.

5. The alignment assembly of claim 4 wherein said solder is a gold/tin alloy.

6. The alignment assembly of claim 1 wherein said alignment stage, said meltable material and said heat source are integrated components defined by a plurality of layers on a substrate.

7. The alignment assembly of claim 6 wherein said substrate is a semiconductor substrate and at least some of said layers have thicknesses of less than 30 micrometers.

8. The alignment assembly of claim 1 wherein said alignment stage is supported by thermally actuated members that provide said adjustment of said relative position of said light source and said lens, said alignment stage being responsive to electrostatic force to selectively displace said alignment stage to contact said meltable material when said target relative position is achieved.

9. An optics module comprising:

an enclosure;

a light source within said enclosure;

a lens positioned within said enclosure to optically manipulate a beam generated by said light source;

an alignment assembly enabled to vary the relative positioning between said lens and an axis of said beam, said alignment assembly being located within said enclosure, said alignment assembly including support members which are flexible to provide said varying relative positioning in a direction generally perpendicular to said axis, said alignment assembly being responsive to actuator forces to flex said support members;

a locking mechanism which disables said alignment assembly to provide a fixed said relative positioning in which said alignment assembly is unresponsive to said actuator forces; and

input/output connections at an exterior of said enclosure for operating said alignment assembly and said locking mechanism.

10. The optics module of claim 9 wherein one of said light source and said lens is fixed to said alignment assembly.

11. The optics module of claim 9 wherein said locking mechanism includes (a) a heater, (b) a solder, and (c) a source of electrostatic force, said alignment assembly being responsive to said electrostatic force to move in a direction generally aligned with said axis of said beam so as to bring said alignment assembly into contact with said solder, said heater being located and activated to selectively melt said solder.

12. The optics module of claim 9 wherein said locking mechanism includes a connection for permanently fixing at least one of said support members in position after a target condition of said relative positioning is achieved.

13. The optics module of claim 9 wherein said support members are thermal actuators that vary said relative positioning in response to applications of heat.

14. The optics module of claim 9 wherein said alignment assembly and said heat source are defined by layers deposited on a semiconductor substrate.

15. A method of forming an alignment assembly for an optics module comprising:

forming a plurality of patterned layers on at least one substrate so as to define a cooperative assembly of:

(a) an alignment stage coupled to enable adjustment of a relative position of a light source and a lens, said alignment stage being configured to support one of said light source and said lens;

(b) meltable material positioned to lock said alignment stage in a fixed location when a target said relative position of said light source and said lens is achieved; and

(c) a heat source in heat-transfer engagement with said meltable material to selectively melt said meltable material.

16. The method of claim 15 wherein forming said patterned layers includes defining said meltable material as a solder.

17. The method of claim 16 wherein defining said meltable material includes depositing a gold/tin alloy.

18. The method of claim 15 wherein forming said patterned layers includes fabricating an actuator that is manipulated by applications of actuator signals.

19. The method of claim 18 wherein fabricating said actuator includes forming said central region supported by flexible members.

20. A method of providing optical alignment within an optics module comprising:

applying actuator signals to laterally displace an alignment stage which controls the relative lateral position of a beam axis to a lens, including controlling said actuator signals to provide a target said relative lateral position;

detecting when said target relative lateral position is achieved;

shifting said alignment stage in a direction generally parallel to said beam axis to contact said alignment stage with a meltable material, including melting said meltable material; and

cooling said meltable material to fix said alignment stage in a position to maintain said target relative lateral position.

21. The method of claim 20 further comprising a fusible structure which disables lateral movement of said alignment stage following said cooling step.

22. The method of claim 20 wherein applying said actuator signals is a step of manipulating thermal actuators that support said alignment stage.

23. The method of claim 20 wherein melting said meltable material is a step of applying heat to a gold/tin alloy.